DATA STRUCTURES AND ALGORITHMS - 2023

Time: 3 Hours   Max Marks: 100

PART A - Answer ALL Questions (10 x 2 = 20 Marks)

1. Define Data Structure and its types.
2. What is the time complexity of binary search?
3. Explain Stack data structure.
4. What is a linked list?
5. Define Big O notation.

PART B - Answer any FIVE Questions (5 x 16 = 80 Marks)

6. Implement stack using arrays with operations.
7. Explain different sorting algorithms with examples.
8. Discuss binary tree traversal methods.
9. Implement queue using linked list.
10. Explain graph representation and BFS algorithm.
11. Discuss dynamic programming with examples.